

62 Global Liveable Cities Index, 100 Greater China Liveable Cities Index and 17 Shandong Cities Composite Development Index: Ranking and Simulation Analysis*

Associate Professor Tan Khee Giap

Co-Director, Asia Competitiveness Institute (ACI)

Lee Kuan Yew School of Public Policy (LKYSPP),

National University of Singapore (NUS)

新加坡国立大学李光耀公共政策学院亚洲竞争力研究所

Chairman, Singapore National Committee for Pacific Economic Cooperation
(SINCPEC)

- Prepared for presentation at the 2017 Integral Conversation on “Health of the Planet and City: Responsible Urbanization”, 9 November 2017, Guilin, Guangxi, China

In 2016 and 2017, ACI was ranked 13th globally, 2nd in Asia and 1st in Singapore amongst 90 think-tanks world-wide under the “Best University Affiliated Think-Tank” category by Think-Tanks & Civil Societies Program at The University of Pennsylvania, USA

ACI's Research Publications on Liveable Cities

亚洲竞争力研究所关于宜居城市的研究出版物

Books:

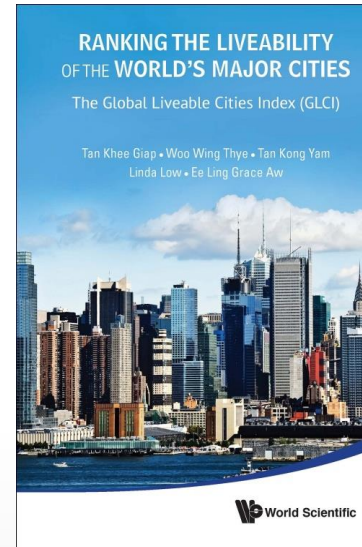
- Tan, K.G., Woo, W.T., Tan, K.Y., Low, L. and Aw, E.L.G. (2012), *Ranking the Liveability of the World's Major Cities: the Global Liveable Cities Index (GLCI)*, World Scientific, Singapore.
- Tan, K.G., Nie, T.X., Baek, S. and Tan, K.Y., *2015 Greater China Liveable Cities Index and the Emerging Concept of Intelligent Cities*, Whioce Publishing, Singapore

Journal Papers:

- Tan, K.G., Woo, W.T. and Aw, G. (2014), "A New Approach to Measuring the Liveability of Cities: The Global Liveable Cities Index", *World Review of Science, Technology and Sustainable Development*, Vol. 11 No. 2, pp. 176–196.
- Tan, K.G., Woo, W.T. and Tan, B.S. (2014), "A New Instrument to Promote Knowledge-led Growth: The Global Liveable Cities Index", *International Journal of Business Competition and Growth*, Vol. 3 No. 3, pp. 174–187.
- Tan, K.G., Nie, T., and Baek, S. (2015), "Empirical Assessment on the Liveability of Cities in the Greater China Region", *Competitiveness Review*, Vol. 26 Iss 1 pp. 2 – 24

Editorial Opinions:

- 陈企业、王克剑、聂彤昕 (2015), 《城市宜居性无关城市大小》, *Lianhe Zaobao* on 27 November 2015
- 陈企业、聂彤昕、白信爱 (2015), 《北京成为宜居城市: 长路漫漫》, *Lianhe Zaobao* on 23 December 2015



Presentation Outline 演讲概述

- **Background & Trends of Urban Development in China**
中国城市发展的宏观背景与形势
- **Motivation, Objective and Conceptualising City Liveability Index**
研究动机, 目标与概念化城市宜居性
- **17 Shandong Cities Composite Development Index: Based on China's Five Concept of Development**
山东省17个城市的综合发展指数: 中国五大发展理念下的理论框架
- **62 Global City Liveability Index: ACI Theoretical Framework**
62全球城市宜居性指数: 亚洲竞争力研究所的理论框架
- **100 Greater China City Liveability Index**
100个大中华宜居城市指数

Background & Trends of Urban Development in China

中国城市发展的宏观背景与形势

- The last few decades have witnessed not only China's impressive economic growth but also the rapid urbanisation process. According to the National Bureau of Statistics of China, the urban population ratio grew from only 10.64% in 1949 to 26.41% in 1990 and further to 54.77% in 2013.

在过去的几十年中，中国不仅取得了引人瞩目的经济增长，也经历了迅速的城市化进程。根据中国统计局数据，城市人口比例从1949年的10.64%，增长到1990年的26.41%，2014年达到54.77%。

- China's speed and scale of urbanisation is unprecedented in human history. Urbanisation in Europe took 150 years to go from 12% to 51%, while China essentially achieved the same level of urbanisation in less than 70 years, half of Europe's time.

中国城市化进程的速度与规模是史无前例的。欧洲历时150年使城市人口比例从12%增长到51%，而中国只用了欧洲一半的时间，不到70年，就达到了相同的城市化程度。

Background & Trends of Urban Development in China

中国城市发展的宏观背景与形势

- The urbanisation in China is largely driven by rural-to-urban migration. With no sign of abating, the trend of urbanisation via rural-to-urban migration is expected to persist. Based on the projection by the World Bank in 2013, China's urban population ratio will climb to near two thirds in 2030.

中国的城市化主要是由农村向城市的人口迁移推动，并且这一人口迁移的趋势仍将继续，根据世界银行在2013年的预测，中国的城市人口将在2030年达到总人口的三分之二。

- In recent years, problems caused by disorganised urbanisation continued to surface and increasingly gained attention of the general public: the depletion of natural resources, traffic congestions in almost all major cities, haze and smog in North China Plain, food safety issues national-wide, social issues related to migrant workers and etc.

近些年来，因无序的城市化导致的问题不断凸显，并得到民众的广泛关注，如自然资源枯竭，主要城市的交通拥挤问题，华北地区的雾霾，全国范围的食品安全问题以及农民工相关的社会问题等。

Background & Trends of Urban Development in China

中国城市发展的宏观背景与形势

- With growth and rising prosperity, Chinese citizens go beyond basic needs to Maslow's hierarchy of needs. Instead of blindly pursuing for economic well-being, they are pursuing overall quality of life. During the 13th Five-Year Plan, China aims to finish building a moderately prosperous society in all respects to fulfill Chinese citizens' increasingly diverse and personalized needs

随着经济的增长与繁荣，中国国民已经超越了仅仅追求满足基本需求的阶段，转为追求马斯洛需求理论中更高层次的需求，对经济利益的盲目追求也转为对总体生活质量的追求。在「十三五」发展阶段，中国将努力实现全面「建成」小康社会的战略目标，人们的需求将日益丰富，多元化和个性化特征更加突出。

- At the government level, the policy-making is also in commensurate with the “Chinese Dream”. In one of the speeches delivered to party leaders in 2013, President Xi Jinping stressed that **gross domestic product (GDP) is no longer the only key performance indicator (KPI) to evaluate the performance of the leaders**. Indicators such as welfare improvement, social development and environment should all be taken into consideration.

在政府层面，政策决策也与「中国梦」相辅相成。习近平主席在2013年全国组织工作会议上对于改变干部考核方式谈到：「既看发展又看基础，既看显绩又看潜绩，把民生改善、社会进步、生态效益等指标和实绩作为重要考核内容，再也不能简单以国内生产总值增长来论英雄了。」

Motivation and Objective 研究动机与目标

- We are convinced that a potentially useful and highly visible project such as ACI's Greater China Liveable Cities Index, is a preliminary yet comprehensive attempt to investigate what are the constituents of, and hence the policy areas that could be identified and improved upon.

我们相信亚洲竞争力研究所的“大中华宜居城市指数”是一项有意义并值得关注的研究。它是对城市宜居性的组成因素和制定相关政策的一次初步但全面的探索。

Theoretical Framework 建构理念和框架

- This study adopts the perspectives of ordinary urbanites to comprehensively assess various aspects of urban development that directly affect residents' life quality. This perspective is coherent with both classic Western and Chinese development theories and highly relevant for China's development challenges now.

本研究的重要特色之一是采取了普通市民的视角，综合地评价城市发展建设过程中与居民生活息息相关的各个方面。这样的研究思路既与中西方经典发展理念一脉相承，也符合中国当前的发展需要。

Conceptualising Urban Development Index: ACI Framework

概念化综合城市发展指数：亚洲竞争力研究所的理论框架

- **An ideal liveable city** would be one that is characterised by vibrant economic growth through the intensity of its economy linkages to a vast hinterland and a specific level of integration to the world economy, yet it could strike a balance in terms of environmental friendliness and sustainability, high quality of life with cultural diversity, security coupled with social-political harmony, which presumably could only be achieved through good governance and effective leadership.

理想中的宜居智慧城市应该是一座拥有经济活力的城市，它与腹地紧密联系又在一定程度上融入世界经济；与此同时，它也能够多方面取得平衡，如环境友好与可持续性、较高的生活水平与文化多样性、安全与社会政治和谐。这些方面大概只能通过良好的管理和有效的领导来实现。

- Perhaps no such ideal city exists, but it should not stop many potential candidates from aspiring or aiming to be an ideal liveable city, and in this context the **facilitative role of the government** in terms her quality leadership and the execution capability must be paramount.

这样理想中的城市可能并不存在，但是在具有领导力和执行力的政府的促进作用下，这并不应该阻止城市对成为理想中的宜居城市的追求。

Conceptualising Urban Development Index: ACI Framework

概念化综合城市发展指数：亚洲竞争力研究所的理论框架

- ACI further supplemented the framework by including another important dimension of liveable and smart city which is **“Intelligent City and Smart Residents” by combining it with Public Service Standards**. In the final analysis, the notion of smart or intelligent cities is not about simply focusing on technology, but rather about directing and managing the use of technology to the advantage of the urban residents, in order to solve and preempt challenges that urbanisation engender, as well as to make living in cities more pleasant and convenient. Concurrently, the government need to implement matched high-standard public service to further develop of intelligent city and provide necessary support for its residence on popularize new technologies.

通过引入宜居与智慧城市另一个重要的方面「**智慧城市建设**」，亚洲竞争力研究所将其与公共服务水平合并来进一步完善研究框架。在最终的分析研究中，智慧城市建设这一概念不是仅仅关注科技发展，而在于引导管理科技的使用来便民利民，以及帮助居民预防和解决城市化带来的问题，使城市生活更加便利愉快。与此同时，政府需要提供配套的高水准公共服务来进一步发展智慧型城市，并在推广新科技方面向居民提供必要的帮助。

Conceptualising Urban Development Index: ACI Framework

概念化综合城市发展指数：亚洲竞争力研究所的理论框架

- ACI further supplemented the framework by including another important dimension of city liveability, which is “**Resource Conditions and Environmental Protection**”. This dimension captures not only the desire of people for responsible stewardship of the environment for the welfare of future generations but also the aesthetic appreciation of nature by people. Furthermore, biological survival of the human species requires that the selfish gene in the human species restrains itself adequately because of its understanding of systemic sustainability (the inter-connectedness of life across species).

亚洲竞争力研究所通过引入「**环保与可持续性**」这一城市宜居性的重要方面来进一步完善研究框架。这个主题不仅表现为人类为了后世的福利而治理环境的责任感，也表现了人类对自然的美学鉴赏。此外，人类物种具有一种生物生存机制，这种机制要求在人类物种中的自私基因要出于对系统可持续性（跨物种生命的内在连通性）的认识而充分进行自我抑制。

Theoretical Framework

建构理念和框架

- In China, the “People Oriented” governing philosophy has deep intellectual roots in traditional Chinese culture. As early as 220 BC, the idea of “people are the foundation of the state; the state enjoys peace when its people are content” was recorded in *Shang Shu* (a collection of ancient Chinese documents before Qin Dynasty). Around the same period, Confucius proposed that the state must sustain, enrich and educate its people. Later, another prominent Confucian thought leader Mencius theorized the relationship between the state, the ruler and the people by suggesting that “people’s needs should take precedence before that of the state or the ruler”. Based on these philosophies, throughout China’s history, generations of Confucian scholars have championed the “Policy of Benevolence” as a fundamental principle of good governance, advising the rulers to adopt economic, social and cultural policies to promote welfare and ensure a decent life for everyone. Furthermore, traditional Chinese philosophers also value equity, balance and harmony. In *Analects*, the Confucius argued that the rulers should “worry not about scarcity, but inequality; worry not about poverty, but instability”, emphasizing the importance of an equitable allocation of resources across geographical regions and social classes. Zhuang Zhou, another prominent Taoism philosopher, pointed out that “the nature is the origin of all things”, reflecting the constant pursuit of a harmony between human and nature in Taoism philosophy.

以「民」为本的思想理念在中华传统文化中源远流长，最早可以追溯到《尚书·五子之歌》中所记载的「民为邦本，本固邦宁」。而在春秋战国时期，孔子也提出过「庶民」、「富民」、「教民」的思想。此后，另一位儒家代表人物孟子则以「民为贵，社稷次之，君为轻」的语句点明了「人民」、「国家」、「君主」之间的主次关系。基于这样的理念，历代儒家学者均将“仁政”视为治国之本，即统治者应为百姓谋福利，宽厚待民，且借助经济、社会、文化等各个方面的措施，保证「黎民不饥不寒」，百姓能够丰衣足食，社会能够稳定发展。此外，中国古代思想也讲求「均衡」与「和谐」。其中，「不患寡而患不均，不患贫而患不安」（《论语-季氏》）阐明了在阶层与区域之间平衡配置资源的重要性；而「天地者，万物之父母也」（《庄子-达生》）则反映出传统道家哲学追求人与自然和谐共处的理念。

Theoretical Framework

建构理念和框架

- Additionally, this study also draws inspirations from Western economic and social theories: Jean-Jacques Rousseau's ideas of the Social Contract and popular sovereignty (*Du contrat social*, 1762); François Perroux's argument for a "people-centric" "new concept of development" (*A New Concept of Development*, 1983); Amartya Sen's call for a more participatory approach to national development (*Rationality and Freedom*, 2002); Joseph Schumpeter's "innovative development" driven by technological, institutional and ideological innovations (*The Theory of Economic Development*, 1912); Joseph Stiglitz's exposé of inequality and social discrimination being exacerbated by globalization (*Globalization and It's Discontents*, 2002); and Herman Daly's attempt to balance environmental conservation and economic growth through sustainable development (*Beyond Growth: The Economics of Sustainable Development*, 2006)

除此之外，本研究也从西方古典与现代经济、社会理论中汲取灵感：其中包括让-雅克-卢梭（《社会契约论》，1762）提出的「人民主权」与「社会契约」思想；弗朗索瓦-佩鲁（《新发展观》，1987）所提倡的「以人为中心」的整体性「综合发展观」；阿马蒂亚-森（《以自由看待发展》，2002）鼓励「个体参与」国家建设的自由发展理念；约瑟夫-熊彼特（《经济发展理论，1912》）所主张的以科技、制度、理念创新为源动力的「创新发展观」；约瑟夫-斯蒂格利茨（《全球化的许诺与失落》，2002）指出的与贫富不均、社会歧视息息相关的全球化问题；赫尔曼-戴利（《超越增长：可持续发展的经济学》，2006）针对自然资源与经济发展之间的冲突所构建的「可持续发展理论」等。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念



Xi Jinping
习近平
7th President of the
People's Republic of China
中华人民共和国主席

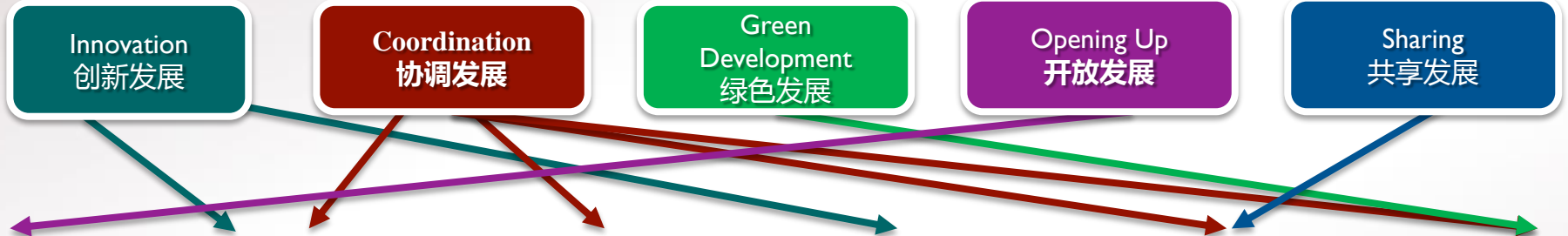
- **The focus of innovative development is to address the issue of growth drivers.**
创新发展注重的是解决发展动力问题
- **The focus of coordinated development is to address the issue of unbalanced development, which has long been a problem for China.**
绿色发展注重的是解决人与自然和谐问题
- **The focus of green development is to address the issue of harmony between humankind and nature.**
绿色发展注重的是解决人与自然和谐问题
- **The focus of open development is to address the issue of internal and external coordination in development.**
开放发展注重的是解决发展内外联动问题
- **The focus of shared development is to address the issue of social equity and justice.**
共享发展注重的是解决社会公平正义问题

Interconnected and mutually reinforcing, these five major principles form a whole that requires unified implementation. None of the principles can be emphasized over, or in place of, any of the others. If our implementation of any one of these principles falls short, our entire process of development will be adversely affected.

这五大发展理念相互贯通、相互促进，是具有内在联系的集合体，要统一贯彻，不能顾此失彼，也不能相互替代。哪一个发展理念贯彻不到位，发展进程都会受到影响。”

— Excerpts from President Xi's speech at the Fifth Plenary Session of the Eighteenth CPC Central Committee, October 29, 2015
摘录自习近平主席在中国共产党中央委员会第十八届五中全会上的讲话

2016 Urban Development Index for 17 Shandong Cities: The Theoretical Framework 2016年山东省17城市发展指数：五大发展理念下的排名与政策模拟



1. Scale and Quality of Economic Activities 经济规模与经济质量	2. Financial Capacity, Labour Market Flexibility and Economic Vibrancy 金融实力、经济活力与和谐度	3. Good Governance, Effective Leadership and Social Stability 政府绩效、公共治理与社会安定	4. Technological Advancement and Innovation Capability 科技进步与创新能力	5. Public Service Standards and Quality of Life Improvement 公共服务与民生发展质量	6. Resource Conditions and Environmental Protection 资源条件与环境保护
1.1 Economic Capacity 经济实力	2.1 Financial Deepening and Business Efficiency 商业金融实力	3.1 Fiscal Sustainability 公共财政	4.1 Research and Development Input 科技资源投入	5.1 Social Security and Standard of Living 社会保障与居民生活质量	6.1 Environmental Quality 环境质量
1.2 Openness to Trade and Services 经济开放度	2.2 Productivity Performance 生产力表现	3.2 Transparency and Accountability 透明度与问责	4.2 Technological Innovation Capability 科技创新能力	5.2 Public Health Care System 公共医疗卫生	6.2 Natural Resources 自然资源
1.3 Inflationary Pressure 通货膨胀压力	2.3 Labour Market Flexibility 劳动力市场灵活度	3.3 Public Governance 公共治理效率	4.3 Research and Development Outcomes 科技创新绩效	5.3 Public Education 公共教育	6.3 Environmental Management 环境治理
1.4 Market Development 经济市场化程度	2.4 Economic Vibrancy & Tripartite Relationship (Government, Employee and Employer) 经济活力与劳资政和谐关系	3.4 Public Security and Social Stability 社会治安与稳定		5.4 Public Transport Infrastructure 公共交通	
				5.5 Public Cultural and InfoComm Services 公共文化与信息服务	

Theoretical Framework

建构理念和框架

- The “People Oriented” philosophy was valued not only in ancient China, it also guides modern Chinese leaders’ governance strategy. Since Chinese Communist Party’s 18th national congress, the new Chinese leadership continues to emphasize the importance of being “people oriented”. Stressing the importance of valuing people’s interests, President Xi Jinping said: “our ultimate goal is to meet people’s aspirations for a better life”. Wrestling with the challenges of an imbalanced economy, a severely degraded environment and a growing social inequality, Chinese leadership put forward the Five Development Concepts as the guiding principles for the 13th Five Year Plan to better “serve the people”.

「以人为本」的思想不仅在中国古代受到重视，也成为当代中国共产党人的治国理念，党的十八大以来，中国新一代领导集体不断强调坚持「以人为本」的重要性。习近平总书记明确提出：「人民对美好生活的向往，就是我们的奋斗目标」，突出并强调了广大人民群众利益的核心地位。以「为人民服务」为根本出发点，面对中国社会经济发展不协调、环境破坏严重、贫富差距加大等挑战，中国领导集体进一步提出了「五大发展理念」，并以此作为「十三五」时期社会经济发展的指导性思想。

Theoretical Framework

建构理念和框架

- Supported by development theories from different schools, in this study we adopt the Five Development Concepts to design a comprehensive framework to assess socio-economic development, public policies, environmental conditions and cultural development in 17 Shandong cities.

由此，以古今中外不同领域、不同视角的思想为理论支撑，本研究将结合引领中国社会发展全局的「五大发展理念」，本着「惠民」、「利民」的原则，建构能够对经济、社会、政策、环境、文化进行全面评估的指标体系框架。

- Based on analyses of development trends in China and abroad, the Five Development Concepts was put forward to guide policy-makers to tackle challenges at China's current stage of development. They embody China's development strategy for the period of "13th Five-year Plan" and beyond. The Five Development Concepts refer to **innovation, coordination, green development, openness and sharing**.

「五大发展理念」是在分析国内外发展趋势的基础上，针对中国的发展阶段、存在的矛盾和解决问题的政策措施提出来的，是「十三五」乃至更长时期中国发展思路和方向的集中体现。「五大发展理念」的基本内容包括：创新、协调、绿色、开放、共享。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- **I. Innovation** is the primary driving force of economic and social development. In order to adhere to the innovative development, we must put this concept in the core position of the overall development. Its main connotation includes the constant promotion of theoretical innovation, institutional innovation, technological innovation and cultural innovation. The more critical point is to let the majority of urban residents understand the theory of innovation, to adapt to the innovation system, to obtain the innovative technology and to accept innovative culture, so that they can fully enjoy the fruits of innovation in life. In our framework, innovative development is represented by “Financial Capacity, Labour Market Flexibility and Economic Vibrancy” and “Technological Advancement and Innovation Capability” environments.

1.创新发展，是引领经济社会发展的第一动力。坚持创新发展，必须把创新摆在发展全局的核心位置，其主要内涵包括不断推进理论创新、制度创新、科技创新、文化创新。更关键的是要让大多数的城市居民理解创新理论、适应创新制度、掌握创新科技、接受创新文化，让人民在生活中能够充分享受创新的成果。「山东17城市发展指数」框架用「金融实力与经济活力」和「科技进步与创新能力」表征创新发展。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- 2. **Coordinated** development places a strong emphasis on a balanced development across different geographical regions and among different aspects of the society. Geographically, coordinated development will lead to a balance between urban and rural areas and across Eastern, Central, Western and Southern Shandong. It also aims to achieve a balance among economic growth, socio-cultural development and environmental conservation. In our framework, coordinated development is represented by “Financial Capacity, Labor Market Flexibility and Economic Vibrancy”, “Good Governance, Effective Leadership and Social Stability” and “Public Service Standards and Quality of Life Improvement” environments.

2.协调发展，要求解决中国现阶段区域发展的不平衡问题，注重山东省内鲁东、鲁中、鲁西、鲁南等不同区域之间发展的平衡性、协调性和可持续性，保证「全面小康」的实现和经济社会的持续健康发展。不断提高全体人民生活质量，追赶先进国家的水平。协调发展的重点在于促进城乡区域协调发展，促进经济、社会、环境与文化的协调发展，促进新型工业化、信息化、城镇化、农业现代化同步发展，在增强国家硬实力的同时注重提升国家软实力，不断增强发展整体性。「山东17城市发展指数」框架用「金融实力与经济活力」、「政府绩效与公共治理」和「公共服务与民生发展质量」来表征协调发展。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- **3. Green** development is a new development paradigm based on environmental conservation and sustainability. It integrates ecological conservation with social-economic development to mitigate pollution, environmental degradation and resource depletion among the many plights of the conventional development paradigm. Green development will lead to a resource-conserving and environmentally friendly society, where people enjoy good environmental conditions comparable to those in developed countries. In our framework, green development is represented by the “Resource Conditions and Environmental Protection” environment.

3.绿色发展，是建立在环境保护和可持续发展理念基础上的新型发展模式，旨在将生态文明建设融入经济、政治、文化、社会建设之中，以缓解和遏制环境污染、生态退化、资源枯竭的传统发展模式弊端。绿色发展要求坚持节约资源和保护环境的基本国策，坚持可持续发展，坚定走生产发展、生活富裕、生态良好的文明发展道路，加快建设资源节约型、环境友好型社会，为人民创造世界先进水平的生活质量，形成人与自然和谐发展现代化建设新格局。「山东17城市发展指数」框架用「资源条件与环境保护」来表征绿色发展。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- **4. Openness** will help China to transcend the national and regional limitations and seek cooperation with the world. It requires China to actively participate in globalization and develop mutually beneficial partnerships. China will also play a more active role in governing the global economy and providing public goods to earn a stronger voice in global institutions and guard against a resurgence of protectionism. Meanwhile, to mitigate the downside of globalization, China needs to adopt policy measures to ensure that benefits of globalization are distributed equitably within a more inclusive society. In our framework, openness is included in the “Scale and Quality of Economic Activities” environment.
4.开放发展，是要突破国家或区域的发展限制，寻求与世界的合作发展。它要求中国的经济发展深度融入全球化经济的趋势，奉行互利共赢的开放战略，积极参与全球经济治理和公共产品供给，发展更高层次的开放型经济，提高中国在全球经济治理中的制度性话语权，构建广泛的利益共同体，反对全球性保护主义的抬头。以公共政策关键性地处理好全球化的负面影响，保障全球化的成果能够在一个更有包容性的社会中与人民共享。「山东17城市发展指数」框架用「经济规模与经济质量」来表征开放发展。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- **5. Sharing** is to use effective public policies and governance innovations to provide extensive public services and tangible benefits for all citizens. Through sharing, China will develop a more equitable society and reduce the income gaps across social classes, between urban and rural areas and across different geographical regions. Policy changes and institutional reforms are needed to ensure basic social security and full employment. An equitable sharing of wealth and social benefits is the ultimate goal and result of the other four development concepts. In our framework, sharing is represented by the “Public Service Standards and Quality of Life Improvement” environment.
5.共享发展，是通过有效的制度安排和社会治理创新所形成完善的公共服务，使全体国民感受到更多的经济和社会发展成果，实现参与性发展，增强发展动力，实现共同富裕。共享发展的目的是解决社会的公平正义问题，缩小阶层、城乡、区域的收入差距，通过制度建设保障基本民生与充分就业。共享发展是坚持其他四种发展理念的目标和成果。「山东17城市发展指数」框架用「公共服务与民生发展质量」来表征共享发展。

The theoretical framework based on President Xi Jinping's five concepts of development 建构理念和框架:习近平主席提出的五大发展理念

- The Five Development Concepts are a coherently interconnected collection. **Innovation**, as the driving force of development, focuses on quality and efficiency. **Coordinated development** highlights the importance of a balanced development to facilitate environmental conservation and equitable sharing. **Green development** ensures a enjoyable living condition for all citizens, which is only achievable through constant technological and institutional innovations. **Openness** leads to a China that is more integrated with the international community where it has to innovate to stay competitive. Meanwhile, with a higher level of participation in global governance, China is also expected to take up more environmental responsibilities. Lastly, **sharing** will help China to build a more equitable and just society, providing moral grounds and motivations for the other four development concepts.

中国的五大发展理念相互贯通、相互促进，是具有内在联系的集合体。创新发展，注重的是更高质量、更高效益。创新发展对协调发展、绿色发展、开放发展和共享发展具有巨大的推动作用。协调发展，注重的是更加均衡、更加全面。坚持协调发展，将显著推进绿色发展和共享发展进程。绿色发展，注重的是更加环保和更加和谐。坚持绿色发展，将深刻影响区域的发展模式和幸福指数。要实现绿色发展，需要不断进行技术创新和发展理念创新。开放发展，注重的是更加优化、更加融入。坚持开放发展，将增强中国经济的开放性和竞争性。开放发展将使发展更加注重创新，更加重视生态文明的影响，更加有利于实现共享发展。共享发展，注重的是更加公平、更加正义。坚持共享发展，将为其他四种发展提供伦理支持和治理动力。

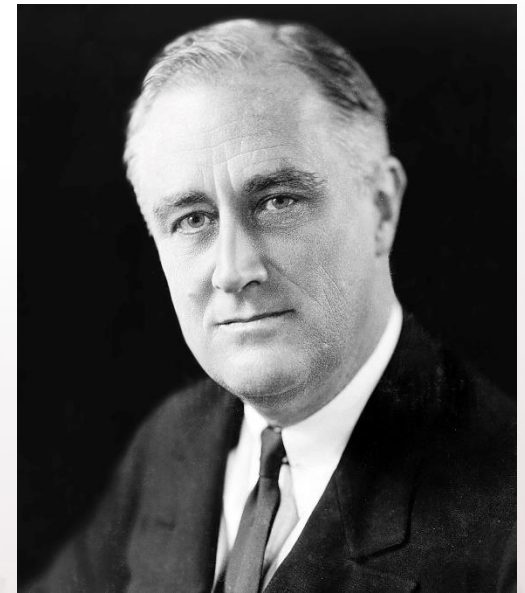
Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- ACI GLCI framework is inspired by 32nd U.S. President, Franklin Roosevelt. In the State of Union Address to the Congress, January 6th, 1941, President Roosevelt mentioned there are four essential human freedoms:

亚洲竞争力研究所GLCI框架是受美国第32任总统富兰克林·罗斯福的启发。在1941年1月6日向国会进行的国情咨文演说中，罗斯福总统提到四项人类的基本自由：

- The freedom from want 免于匮乏的自由
- The freedom from fear 免于恐惧的自由
- The freedom to worship 宗教自由
- The freedom to speak 言论自由



Franklin D. Roosevelt
32nd U.S. President
富兰克林·D·罗斯福
第32任美国总统

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- **“The freedom from want” “免于匮乏的自由”**

- Captures the right to have a decent livelihood. More broadly, this dimension emphasises people’s craving for creature comforts (material abundance). The degree that this craving is satisfied is, in large part, determined by the income level and the growth rate of income: two issues that are central to the field of economics.

表现的是过体面生活的权利，更广泛地说，这一主题强调人对衣食无忧的渴望（物质富足），对这种渴望的满足程度在很大程度上取决于收入水平和收入增长率，这是经济学领域的两个主要问题。

- The terminology adopted in ACI GLCI framework to represent this dimension is “Economic Vibrancy & Competitiveness”.

亚洲竞争力研究所GLCI框架使用“经济活力与竞争力”来代表该方面。

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- **“The freedom from fear” “免于恐惧的自由”**

- Stresses the natural right of people to live in safety through the maintenance of law and order, the alleviation of natural disasters, and the prevention of wars by the state. The absence of such psychological pressure in a city increases its liveability in the same way that an improvement in the economic prospects of a city increases its liveability.

表现了人民安全生存的自然权利，这种权利是通过维护法律和秩序、自然灾害的缓解和国家对战争的阻止等来实现。一个没有这样的心理压力的城市，宜居性水平就会提高，就像一个城市经济前景改善同样会提高该城市的宜居性水平一样。

- The terminology adopted in ACI GLCI framework to represent this dimension is “Domestic Security & Stability

亚洲竞争力研究所GLCI框架使用“国内安全与稳定”来代表该方面。

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- **“The freedom to worship” “宗教自由”**

- Subsumed within the broader dimension of “Socio-Cultural Conditions”. For a city, this dimension emphasises the social comfort of living there (e.g. degree of income inequality, social harmony, and social mobility); the physical ease of living there (e.g. adequacy of mass transit, healthcare, and education); the cultural richness of living there (e.g. amount of social diversity, acceptance of different religious beliefs, and access to museums and cultural performances).

被包含于更广泛的“社会文化条件”之中。对于一个城市来说，这个主题强调的是：生活在该城市的社会舒适程度（例如，收入不平等程度、社会和谐和社会流动性）；生活在该城市的物质舒适程度（例如，充足的大众运输、医疗保健和教育）；生活在该城市的文化丰富程度（例如，社会的多样性、对不同宗教信仰的接受程度、欣赏博物馆和文化表演的机会）。

- The terminology adopted in ACI GLCI framework to represent this dimension is “Socio-Cultural Conditions”.

亚洲竞争力研究所GLCI框架使用“社会文化条件”来代表该方面。

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- **“The freedom to speak” “言论自由”**

- Subsumed within the broader dimension of “Political Governance”. This dimension covers the effectiveness of the government in providing public services (e.g. extent of corruption and quality of judiciary system); the responsiveness of the government (e.g. degree of transparency and accountability); and the openness to political participation (e.g. regular elections that are free and fair).

被包含于更广泛的“政治管理”之中。本主题涵盖了：政府提供公共服务的有效性（例如，腐败程度和司法系统的质量）；政府的反应力（例如，透明度和问责制）；以及政治参与的开放程度（例如，自由和公平的定期选举）。

- The terminology adopted in ACI GLCI framework to represent this dimension is “Political Governance”.

亚洲竞争力研究所GLCI框架使用“政治管理”来代表该方面。

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- ACI further supplemented the framework by including another important dimension of city liveability, which is **“Environmental Friendliness & Sustainability”**. This dimension captures not only the desire of people for responsible stewardship of the environment for the welfare of future generations but also the aesthetic appreciation of nature by people. Furthermore, biological survival of the human species requires that the selfish gene in the human species restrains itself adequately because of its understanding of systemic sustainability (the inter-connectedness of life across species).

亚洲竞争力研究所通过引入“环保与可持续性”这一城市宜居性的重要方面来进一步完善研究框架。这个主题不仅表现为人类为了后世的福利而治理环境的责任感，也表现了人类对自然的美学鉴赏。此外，人类物种具有一种生物生存机制，这种机制要求在人类物种中的自私基因要出于对系统可持续性（跨物种生命的内在连通性）的认识而充分进行自我抑制。

Conceptualising Liveability: ACI GLCI Framework

概念化宜居性：亚洲竞争力研究所理论框架

- Liveability is defined by five dimensions/environments under ACI GLCI framework. Each of the five environment also contains sub-environments as listed below:

在亚洲竞争力研究所GLCI框架下，宜居性包含五个维度/指标大类，如下所示，每个指标大类还包括一些子类别：

Inspired Themes of City Liveability	ACI-GLCI Environments	ACI-GLCI Sub-Environments
Satisfaction with “the freedom from want”	<u>Economic Vibrancy & Competitiveness</u>	<ul style="list-style-type: none"> ➢ Economic Performance ➢ Economic Openness ➢ Infrastructure
Satisfaction with the status of natural environment and its management	<u>Environmental Friendliness & Sustainability</u>	<ul style="list-style-type: none"> ➢ Pollution ➢ Depletion of Natural Resources ➢ Environmental Initiatives
Satisfaction with “the freedom from fear”	<u>Domestic Security & Stability</u>	<ul style="list-style-type: none"> ➢ Crime Rate ➢ Threats to National Stability ➢ Civil Unrest
Satisfaction with the socio-cultural conditions (“the freedom to worship”)	<u>Socio-Cultural Conditions</u>	<ul style="list-style-type: none"> ➢ Medical & Healthcare ➢ Education ➢ Housing, Sanitation & Transportation ➢ Income Equality & Demographic Burden ➢ Diversity & Community Cohesion
Satisfaction with political governance (“the freedom to speak”)	<u>Political Governance</u>	<ul style="list-style-type: none"> ➢ Policy Making & Implementation ➢ Government System ➢ Transparency & Accountability ➢ Corruption

城市宜居性主题	ACI-GLCI 指标大类	ACI-GLCI 指标子类别
对“免于匮乏的自由”的满意度	<u>经济活力与竞争力</u>	<ul style="list-style-type: none"> ➢ 经济绩效 ➢ 经济开放 ➢ 基础设施
对自然环境及其管理状况的满意度	<u>环保与可持续性</u>	<ul style="list-style-type: none"> ➢ 污染 ➢ 自然资源消耗 ➢ 环保措施
对“免于恐惧的自由”的满意度	<u>国内安全与稳定</u>	<ul style="list-style-type: none"> ➢ 犯罪率 ➢ 对国家稳定的威胁 ➢ 社会动乱
对社会文化状况的满意度 (“宗教自由”)	<u>社会文化条件</u>	<ul style="list-style-type: none"> ➢ 医疗保健 ➢ 教育 ➢ 住房、卫生与交通运输 ➢ 收入平等与人口结构负担 ➢ 多样性与社区凝聚力
对政治治理的满意度 (“言论自由”)	<u>政治管理</u>	<ul style="list-style-type: none"> ➢ 政策制定与实施 ➢ 政府体制 ➢ 透明度与问责制 ➢ 腐败情况

Framework for constructing Global Liveable Cities (GLC) Index 构建全球宜居智慧性城市综合竞争力指数的框架

<p>(1) Economic Vibrancy & Competitiveness 经济活力与竞争力</p>	<p>(2) Environmental Friendliness & Sustainability 环境友好与可持续发展</p>	<p>(3) Domestic Security & Stability 国内安全与稳定</p>	<p>(4) Quality of Life & Diversity 生活质量与多样性</p>	<p>(5) Good Governance & Effective Leadership 有效治理与高效领导</p>
<p>1.1 Economic Performance 经济运行情况</p>	<p>2.1 Pollution 污染</p>	<p>3.1 Crime Rates 犯罪率</p>	<p>4.1 Medical & Healthcare 医疗保健</p>	<p>5.1 Policy Making & Implementation 政策制定与施行</p>
<p>1.2 Economic Openness 经济开放程度</p>	<p>2.2 Depletion of Natural Resources 自然资源的消耗</p>	<p>3.2 Threats to National Stability 国家稳定的威胁</p>	<p>4.2 Education 教育</p>	<p>5.2 Government System 政府系统</p>
<p>1.3 Infrastructure 基础设施</p>	<p>2.3 Environmental Initiatives 保护环境的行动</p>	<p>3.3 Civil Unrest 国内动乱</p>	<p>4.3 Housing, Sanitation & Transportation 住房, 卫生设施与交通</p>	<p>5.3 Transparency & Accountability 透明度与回应性</p>
			<p>4.4 Income Equality & Demographic Burden 收入不均和人口负担</p>	<p>5.4 Corruption 腐败</p>
			<p>4.5 Diversity & Community Cohesion 多样性与社区凝聚</p>	

Methodology 方法论

Ranking Algorithm 排名算法

- The basis for the ranking is the standardised value. We first compute the average of all cities for each indicator followed the standard deviation. The standardised value is calculated as follow:

排名的基础是标准化值。对于每个指标，我们首先计算所有城市的平均值，而后计算标准偏差。标准化值的计算如下：

$$\text{Standardised value (标准化值)} = \frac{\text{Original Value (原值)} - \text{Mean (平均值)}}{\text{Standard Deviation (标准偏差)}}$$

- 0 (zero) = same as the average of all cities 等于所有城市的平均值
- - (negative) = below the average of all cities 低于所有城市的平均值
- + (positive) = above the average of all cities 高于所有城市的平均值

- There are four levels in ranking algorithm 排名算法包含四个级别：
 - Indicators 指标
 - Sub-environments 子类别
 - Environments 类别
 - Overall liveability 总体宜居性
- Adopt equal weights to derive the score for the next higher level from the scores of current level.

当利用当前级得分计算下一级得分时，采用相同的权重。

Methodology 方法论

What-if Simulation Analysis “What-if” 模拟分析

- Ranking exercise alone is like a beauty contest: lacking constructive suggestions.
单纯的排名就像选美比赛：缺乏建设性意见
- With What-if Simulation Analysis, ACI attempts to answer the “so-what” question.
亚洲竞争力研究所试图利用 “What-if” 模拟分析来回答 “那又该如何” 的问题。
- What-if Simulation Analysis is based on two assumptions:
 - “What-if” 模拟分析基于两点假设：
 - Each city will work on areas where their rankings are worst in order to improve. This is identified by their lowest (worst-performing) 20 percent of the indicators which are selected from the entire list of indicators.
每个城市将致力于改善其排名最差的领域。每个城市根据其所有指标中最低（最差）的20%来标识出其需要改善的领域。
 - After identifying the 20 percent most lagging indicators, scores are simulated to the “average” score for all cities.
在确定了20%最差的指标后，通过模拟分析使这些指标的得分达到所有城市的平均水平。
- What-if Simulation Analysis is a static simulation.
“What-if” 模拟分析是一项静态模拟分析。

Data Sources, Data Constraints and Data Proxies

数据来源，限制和替代

- Both hard data and survey data are used in this study:

本项研究同时采用了硬数据和调查数据：

- Hard data are collected from publicly available sources including China Statistical Yearbook, China City Statistical Yearbook, China Urban Construction Statistical Yearbook, Hong Kong Annual Digest of Statistics, Macau Yearbook of Statistics, Taiwan Statistical Data Book, Taiwan Urban and Regional Development Statistics and etc.

硬数据采自于公开数据来源，包括中国统计年鉴，中国城市统计年间，中国城市建设统计年鉴，香港统计年刊，澳门统计年鉴，台湾统计手册，台湾都市及区域发展统计汇编等等。

- Survey data are gathered by conducting random phone surveys in all 100 Greater China cities. 300 successful responses are obtained for each city.

调查数据是通过随机电话采访收集的。在研究中涉及的100个大中华城市中，每个城市采集了300份成功回复。

Data Sources, Data Constraints and Data Proxies

数据来源，限制和替代

- Constructing ranking indices for cities are more challenging than at country level or sub-national level due to acute difficulties on data availability and their quality or accuracy, and compromise may have to be made where sub-national (provincial) data are sometimes being used to proxy local conditions.

与构建国家层面的排名指数相比，构建城市排名指数更具挑战性。在城市层面上，收集可用数据以及保证所得数据的质量和准确性都非常困难，因此有时需要利用省级数据来替代城市数据。

- At times one may not want to forsake certain highly relevant indicators, however, given its non-availability in some of the cities for example, proxy values have to be adopted. Such practice may continue for some cities until such time that data becomes available.

有时因为并不想放弃一些高度相关的指标，对于某些城市的数据无法获得的情况，我们会使用替代值。这种使用替代值的方法可能会一直被采用，直到将来能够获得这些数据。

Ranking and Simulation Results

排名与政策模拟结果

Overall ranking 整体排名

City	城市	“What-if” simulation “What-if”模拟分析			“What-if” simulation “What-if”模拟分析		Rank Change 排名变化
		Score Before 模拟前分数	Score After 模拟后分数	Score Change 分数变化	Rank Before 模拟前排名	Rank After 模拟后排名	
Qingdao	青岛	1.483	2.297	0.814	1	1	0
Jinan	济南	1.277	2.071	0.793	2	1	1
Weihai	威海	1.275	1.707	0.432	3	1	2
Dongying	东营	1.131	1.898	0.768	4	1	3
Yantai	烟台	1.129	1.593	0.464	5	1	4
Weifang	潍坊	0.880	1.344	0.463	6	2	4
Zibo	淄博	0.436	1.018	0.583	7	6	1
Taian	泰安	-0.123	0.442	0.565	8	7	1
Dezhou	德州	-0.331	0.377	0.708	9	8	1
Linyi	临沂	-0.394	0.277	0.671	10	8	2
Rizhao	日照	-0.407	0.241	0.648	11	8	3
Binzhou	滨州	-0.667	0.059	0.726	12	8	4
Jining	济宁	-0.743	0.060	0.803	13	8	5
Heze	菏泽	-0.822	-0.003	0.819	14	8	6
Zaozhuang	枣庄	-1.078	-0.502	0.576	15	12	3
Laiwu	莱芜	-1.286	-0.136	1.150	16	8	8
Liaocheng	聊城	-1.759	-0.807	0.952	17	12	5

Positive rank change indicates improvement in ranking
排名变化值为模拟前后排名的提升

Tentative empirical overall ranking for 64 global cities

Name of Cities	Region	Overall Livability	
		Score	Rank
Geneva	Europe	3.40	1
Zurich	Europe	4.60	2
Singapore	Asean	5.60	3
Copenhagen	Europe	7.00	4
Helsinki	Europe	7.00	4
Luxembourg	Europe	7.80	6
Stockholm	Europe	8.20	7
Berlin	Europe	11.20	8
Hong Kong	Asia	11.20	8
Auckland	Oceania	11.60	10
Melbourne	Oceania	11.60	10
Sydney	Oceania	12.00	12
Paris	Europe	12.40	13
Vancouver	North America	16.20	14
Amsterdam	Europe	16.80	15
Osaka-Kobe	Asia	17.80	16
New York	North America	18.20	17
Tokyo	Asia	18.60	18

Name of Cities	Region	Overall Livability	
		Score	Rank
L.A	North America	18.80	19
Philadelphia	North America	21.40	20
Yokohama	Asia	21.40	20
Boston	North America	21.60	22
London	Europe	21.60	22
Chicago	North America	22.40	24
Washington DC	North America	22.80	25
Barcelona	Europe	23.20	26
Taipei	Asia	24.00	27
Prague	Europe	25.80	28
Seoul	Asia	26.20	29
Madrid	Europe	27.00	30
Incheon	Asia	27.40	31
Abu Dhabi	Mid east	32.00	32
Kuala Lumpur	Asean	32.00	32
Rome	Europe	34.00	34
Amman	Mid east	36.60	35

List of 100 Greater China Cities in the Study

研究涵盖的100个大中华地区城市列表

- To provide comprehensive coverage of major cities in Greater China, the cities are selected based on the following two criteria:

为了能全面覆盖大中华地区的主要城市，我们基于以下两个标准来选择城市：

- The capital cities of 34 Greater China economies.

34个大中华地区经济体的省会城市。

- Cities with highest gross regional product (GRP) in 2011, the most updated data available when the study was started in 2013.

2011年地区生产总值排名靠前的城市，2011年数据是本项研究在2013年开始时可用的最新数据。

Research Findings 研究发现

• Overall Liveability Ranking for 100 Greater China Cities

100个大中华城市总体宜居性排名

Rank 排名	City	城市	Economy	经济体	Score 得分
1	Macau	澳门	Macau	澳门	4.5544
2	Weihai	威海	Shandong	山东	2.8669
3	Hong Kong	香港	Hong Kong	香港	2.6151
4	Yantai	烟台	Shandong	山东	1.4956
5	Xiamen	厦门	Fujian	福建	1.4660
6	Taipei	台北	Taiwan	台湾	1.2570
7	Weifang	潍坊	Shandong	山东	1.1977
8	Nantong	南通	Jiangsu	江苏	1.1226
9	Changzhou	常州	Jiangsu	江苏	1.1189
10	Nanjing	南京	Jiangsu	江苏	0.9566
11	Hangzhou	杭州	Zhejiang	浙江	0.9288
12	Dongying	东营	Shandong	山东	0.9179
13	Binzhou	滨州	Shandong	山东	0.9114
14	Qingdao	青岛	Shandong	山东	0.8720
15	Wuxi	无锡	Jiangsu	江苏	0.8692
16	Yangzhou	扬州	Jiangsu	江苏	0.7496
17	Tai'an	泰安	Shandong	山东	0.6799
18	Taizhou, Jiangsu	江苏泰州	Jiangsu	江苏	0.6702
19	Lhasa	拉萨	Tibet	西藏	0.6567
20	Ningbo	宁波	Zhejiang	浙江	0.6419

Research Findings 研究发现

• Overall Liveability Ranking for 100 Greater China Cities

100个大中华城市总体宜居性排名

Rank 排名	City	城市	Economy	经济体	Score 得分
21	Zibo	淄博	Shandong	山东	0.5474
22	Linyi	临沂	Shandong	山东	0.5303
23	Zhongshan	中山	Guangdong	广东	0.4917
24	Zhuzhou	株洲	Hunan	湖南	0.4833
25	Kaohsiung	高雄	Taiwan	台湾	0.4754
26	Wuhu	芜湖	Anhui	安徽	0.4711
27	Jiaxing	嘉兴	Zhejiang	浙江	0.4634
28	Suzhou	苏州	Jiangsu	江苏	0.4566
29	Fuzhou	福州	Fujian	福建	0.4326
30	Haikou	海口	Hainan	海南	0.3937
31	Shanghai	上海	Shanghai	上海	0.3816
32	Jinan	济南	Shandong	山东	0.3788
33	Hefei	合肥	Anhui	安徽	0.3755
34	Changde	常德	Hunan	湖南	0.3612
35	Shenzhen	深圳	Guangdong	广东	0.3581
36	Dalian	大连	Liaoning	辽宁	0.3493
37	Zhangzhou	漳州	Fujian	福建	0.3358
38	Xuchang	许昌	Henan	河南	0.3064
39	Taizhou, Zhejiang	浙江台州	Zhejiang	浙江	0.2930
40	Shaoxing	绍兴	Zhejiang	浙江	0.2884

Research Findings 研究发现

- Overall Liveability Ranking for 100 Greater China Cities

100个大中华城市总体宜居性排名

Rank 排名	City	城市	Economy	经济体	Score 得分
41	Jinhua	金华	Zhejiang	浙江	0.2681
42	Nanning	南宁	Guangxi	广西	0.2576
43	Dezhou	德州	Shandong	山东	0.2239
44	Beijing	北京	Beijing	北京	0.1923
45	Jining	济宁	Shandong	山东	0.1773
46	Ordos	鄂尔多斯	Inner Mongolia	内蒙古	0.1726
47	Taichung	台中	Taiwan	台湾	0.1509
48	Zhenjiang	镇江	Jiangsu	江苏	0.1226
49	Yueyang	岳阳	Hunan	湖南	0.1118
50	Yichang	宜昌	Hubei	湖北	0.1079
51	Quanzhou	泉州	Fujian	福建	0.1071
52	Yinchuan	银川	Ningxia	宁夏	0.0331
53	Yancheng	盐城	Jiangsu	江苏	0.0209
54	Huai'an	淮安	Jiangsu	江苏	-0.0186
55	Xuzhou	徐州	Jiangsu	江苏	-0.0376
56	Chengdu	成都	Sichuan	四川	-0.0436
57	Luoyang	洛阳	Henan	河南	-0.0775
58	Liaocheng	聊城	Shandong	山东	-0.0990
59	Chongqing	重庆	Chongqing	重庆	-0.1045
60	Baotou	包头	Inner Mongolia	内蒙古	-0.1111

Research Findings 研究发现

• Overall Liveability Ranking for 100 Greater China Cities

100个大中华城市总体宜居性排名

Rank 排名	City	城市	Economy	经济体	Score 得分
61	Guiyang	贵阳	Guizhou	贵州	-0.1636
62	Liuzhou	柳州	Guangxi	广西	-0.1664
63	Kunming	昆明	Yunnan	云南	-0.1864
64	Jilin City	吉林市	Jilin	吉林	-0.2495
65	Daqing	大庆	Heilongjiang	黑龙江	-0.3105
66	Changsha	长沙	Hunan	湖南	-0.3362
67	Guangzhou	广州	Guangdong	广东	-0.3644
68	Heze	菏泽	Shandong	山东	-0.3884
69	Zaozhuang	枣庄	Shandong	山东	-0.4790
70	Nanchang	南昌	Jiangxi	江西	-0.5132
71	Tianjin	天津	Tianjin	天津	-0.5437
72	Jiangmen	江门	Guangdong	广东	-0.5908
73	Cangzhou	沧州	Hebei	河北	-0.6035
74	Shenyang	沈阳	Liaoning	辽宁	-0.6379
75	Xi'an	西安	Shaanxi	陕西	-0.6422
76	Huizhou	惠州	Guangdong	广东	-0.6674
77	Taiyuan	太原	Shanxi	山西	-0.7039
78	Xiangyang	襄阳	Hubei	湖北	-0.8188
79	Xining	西宁	Qinghai	青海	-0.8678
80	Changchun	长春	Jilin	吉林	-0.8895

Research Findings 研究发现

• Overall Liveability Ranking for 100 Greater China Cities

100个大中华城市总体宜居性排名

Rank 排名	City	城市	Economy	经济体	Score 得分
81	Langfang	廊坊	Hebei	河北	-0.8937
82	Wenzhou	温州	Zhejiang	浙江	-0.8969
83	Anshan	鞍山	Liaoning	辽宁	-0.9228
84	Dongguan	东莞	Guangdong	广东	-0.9275
85	Zhengzhou	郑州	Henan	河南	-0.9370
86	Foshan	佛山	Guangdong	广东	-0.9714
87	Wuhan	武汉	Hubei	湖北	-1.0222
88	Shijiazhuang	石家庄	Hebei	河北	-1.1436
89	Tangshan	唐山	Hebei	河北	-1.1747
90	Urumqi	乌鲁木齐	Xinjiang	新疆	-1.1809
91	Handan	邯郸	Hebei	河北	-1.2396
92	Hengyang	衡阳	Hunan	湖南	-1.2587
93	Harbin	哈尔滨	Heilongjiang	黑龙江	-1.4460
94	Yulin	榆林	Shaanxi	陕西	-1.4473
95	Baoding	保定	Hebei	河北	-1.4487
96	Nanyang	南阳	Henan	河南	-1.4494
97	Zhanjiang	湛江	Guangdong	广东	-1.5535
98	Hohhot	呼和浩特	Inner Mongolia	内蒙古	-1.6465
99	Lanzhou	兰州	Gansu	甘肃	-2.1154
100	Maoming	茂名	Guangdong	广东	-2.3776

Thank you!

谢谢!